

C1
Fig. 53

oxidizing a main surface of a silicon substrate,
forming an oxidation-preventing film on portions of the oxidized silicon substrate,
removing a part of the oxidation-preventing film that is located in an element-separating area,
forming an element-separating oxide film on the silicon substrate in the element-separating area after removing the part of the oxidation-preventing film,
forming a thermal oxide film on the silicon substrate by oxidizing the silicon substrate, and
after forming the thermal oxide film, carrying out a heat-treatment at a temperature of 800° C or higher in an inert atmosphere, and
which further comprises forming a gate oxide film over the heat-treated silicon substrate.

A

23. (amended) A process for producing a semiconductor device, which comprises the steps of:

C2

oxidizing a main surface of a silicon substrate,
forming an oxidation-preventing film on portions of the oxidized silicon substrate,
removing a part of the oxidation-preventing film that is located in an element-separating area,
forming an element-separating oxide film on the silicon substrate in the element-separating area after removing the part of the oxidation-preventing film,
forming a thermal oxide film on the silicon substrate by oxidizing the silicon

substrate,

forming a gate electrode film on the thermal oxide film, and

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after forming the gate electrode film, carrying out a heat-treatment at a temperature of 800°C or higher in an inert atmosphere.
